had lost the whole of the diaphysis of the tibia from acute osteomyelitis and by two operations the shaft of the adjacent fibula was placed between the surviving epiphyses of the tibia. Four years later the transplanted bone had approximated in size to the original tibia, and the child could walk and run without any noticeable limp. Cases such as these, though as yet they may be few in number, suggest a great promise for the future. The experience of MACEWEN shows that portions of bone removed from other persons may supply the deficiencies in a patient, but it seems clear that the best provider of bone-grafts is the patient himself. The present position of bone-grafting is highly promising, and the more the conditions under which bone-grafts live and grow are studied the better the results that will be obtained. A great field of research lies open, a field in which ample room will be found for that coöperation between the physiologist and the surgeon which must mark the real progress of the future.

Meat Rationing in London and the Home Counties.

THE question of the moment in regard to food control is somewhat excitedly centred in the new provisions outlined in the scheme of restricted meat allowances to come into force in London and the Home Counties on Feb. 25th next. Already a number of coupon cards has been distributed. The particulars of the scheme have been widely published in the press, and everybody is now familiar with them in detail. Generally speaking, the scheme entails cutting down very considerably the allowance of butchers' meat, and on so many days the dietary will perforce show in so many instances an abeyance of butchers' meat altogether. It is easy enough to foreshadow difficulties connected with the fair and successful administration of the proposals, which we are told may receive modification at any time, but we are unwilling to believe that the Ministry of Food has failed to realise the great responsibilities of launching such a scheme upon a large and critical community. On the whole, the public appears to be inclined to unnecessary misgivings on the subject, but we think that, provided other classes of food are available, such as fish, eggs, vegetables, and fats, it will soon be appreciated that meat is not so essential a factor of our diet as has been for long maintained. The diminished allowance of meat can obviously be compensated—it has been already to a great extent; but all turns, it seems to us, on the question of the adequate supply of meat replacers. If fair substitution is ensured no anxiety of a shortage of body reparatives need enter our minds. The progress of the tentative movement will be watched with extreme interest, but this policy need not be extended to the rest of the country as a whole, as in some localities, we understand, satisfactory schemes are already in existence.

Annotations.

"Ne quid nimis."

THE EPIDEMIOLOGY OF PLAGUE.

Bubonic plague is endemic in the British Empire and its presence in normal times is a constant menace to the public health of the community. Under war conditions, which necessarily entail increased movement of population with less efficient means of control, naturally the risk is increased. Dr. John Brownlee's contribution on Feb. 8th at the Royal Society of Medicine to the theory of plague epidemiology is therefore specially welcome. As statistician to the Medical Research Committee he dealt with the broad aspect of the whole subject, showing in the first instance that the great bulk of plague epidemics in such large towns as London, Bombay, Calcutta, and Sydney during the last three centuries have had certain common features. He continued:—

> These epidemics have been symmetrical in shape and their form essentially constant during the whole period. The same form of epidemic has occurred among rats. Two different theories may be entertained. Assuming infection to be proportional to the number of acute cases at any moment, the epidemic ends, on the first hypothesis, from lack of susceptible persons and, on the second, from loss of infecting power on the part of the organism. In Bombay the first hypothesis is numerically consistent with the data for brown rats, but not in the case of the black variety. In man the form of the epidemic shows points of difference demanding some secondary hypothesis, e.g., that disease foci when present in large numbers are more effective in spreading the disease than sparse ones; following the law which connects density of population and death-rate. In the United Provinces of India, where marked variations in weather occur from year to year, the November humidity is closely associated with the humidity of succeeding months and with the number of plague cases in the epidemic, the exact relationship being that the logarithm of the number of cases is proportional to the humidity. Periodicities independent of the solar year probably exist in Poona, Cawnpore, and other towns. Weather conditions varying from month to month do no more than modify the form of the natural epidemic.

The broad epidemiological aspect would also be of great interest in regard to the outbreak of pneumonic plague reported from China.

Early in January it was officially announced from Peking that pneumonic plague had broken out on the borders of Mongolia, and that the infection had spread into Shansi, one of the four northern provinces of China. The disease was then threatening to extend southwards and eastwards into the populous province of Chih-li, in which is situated Peking, the capital of the Chinese republic. The present outbreak resembles closely that which, early in 1911, swept over the Mongolian border into Manchuria, and in little more than three months carried off between 50,000 and 60,000 victims.[1] That epidemic, like the present one, began in the cold season, and both appear to have been aided in their development by the exceptional severity of the winter. Both outbreaks had their origin on the Mongolian border, which is a recognised endemic area of plague, and the endemicity is said to be associated with the presence of the disease in a species of marmot, called the tarbagan, found there in large numbers and hunted in the autumn months for the sake of its fur, now in great demand. In both outbreaks the infection spread rapidly along the lines of railway communication, and in neither of them was the diffusion assisted by the agency of rats or fleas,

[1] THE LANCET, 1911, i., 1152.